Lazy Evaluation

Christian Mendez, Christian Zabinski, Rafael Casanova-Silva, Alec Brenes, Elijah Zimmerman

What is Lazy Evaluation?

- The opposite of eager evaluation
  - Evaluate parameters before calling function
- Lazy evaluation sends parameters as operations

Why Use Lazy Evaluation?

- Optimizes function computations
- Does not need to evaluate information that is not used
- Helps modularity of code

Example

Instead of passing in

- fun(1+2, 4*3)

as arguments 3 and 12, it will be passed in as 1+2 and 4*3

Example Cont.

```
int fun(x, y)
{
    int n = x + 15;
    return n;
}
```

Your Turn

How are these arguments passed into the function in eager evaluation?

foo(8*2, 6-5)

What about in lazy evaluation?

Any downsides?

- Bug tracking can become more difficult
- May increase space complexity, as operations must be stored

Code Demo